

A device for determining ...

S/081/62/000/015/010/038
B168/B101

other media. The method is examined theoretically, and the instrument and the method employed for its calibration are described. [Abstracter's note: Complete translation.]

Card 2/2

AKIMOV, V.F.

Compensation for errors caused by temperature in measuring the
conductivity of electrolytes by direct measuring apparatus. Trudy
Giprovostoknefti no.4:265-273 '61. (MIRA 16:8)
(Electrolytes--Conductivity) (Measuring instruments)

AKIMOV, Vyacheslav Filippovich, inzh.; VINOGRADOV, Yuriy Ivanovich,
inzh.; GINZBURG, Mark Yakovlevich, inzh.; KASPAR'YANTS,
Konstantin Saakovich, inzh.; FRANKFURT, Yakov Mironovich,
inzh.; MAMIKONOV, A.G., red.; NOVICHKOVA, M.M., ved. red.;
VORONOVA, V.V., tekhn. red.

[Automation of field petroleum processing and gas transporta-
tion] Avtomatizatsiya promyslovoi podgotovki nefi i transporta
gaza. [By] V.F. Akimov i dr. Moskva, Gostoptekhizdat, 1963. 166 p.
(MIRA 16:3)

(Oil fields--Equipment and supplies) (Automation)
(Gas, Natural--Pipelines)

AKIMOV, V.F.; VOZNESENSKIY, Yu.A.; POPKOV, V.V.

Dynamic properties of a trap-separator as an object of automatic control. Neft. khoz. 42 no.7:52-56 J1 '64.
(MIRA 17:8)

SHISHKIN, Oleg Petrovich; PARFENOV, Afanasiy Nikolayevich;
AKIMOV, V.F., kand. tekhn. nauk; VRONSKIY, L.N., ved. red.

[Principles of automatic control and the automation of
industrial processes] Osnovy avtomatiki i avtomatizatsiya
proizvodstvennykh protsessov. Moskva, Nedra, 1965. 340 p.
(MIRA 18:5)

1. Gosudarstvennyy vsesoyuznyy issledovatel'skiy i proyektnyy
institut neftyanoy promyshlennosti (for Akimov).

KULAK, I.A.; AKIMOV, V.G.

New method for studying the higher nervous activity of dogs
in the case of motor reinforcement. Dokl. AN BSSR 4 no. 5:222-
225 My '60. (MIRA 13:10)

1. Institut fiziologii AN BSSR. Predstavleno akademikom
AN BSSR V.A. Leonovym.

(CONDITIONED RESPONSE)

BLINOVA, Z.A., kand.tekhn.nauk; VINITSKIY, L.Ye., kand.tekhn.nauk; MAL'TSEVA, O.N.,
inzh.; YAKOVLEV, M.A.; AKIMOV, V.G., nauchnyy sotrudnik

Selecting wear resistant rubber for the cones of the central locomotive
bearers. Elek. i tepl.tiaga 7 no.11:36-38 N '63. (MIRA 17:2)

1. Otdeleniye polimerov Vsesoyuznogo nauchno-issledovatel'skogo instituta
zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Bli-
nova, Vinit'skiy, Mal'tseva). 2. Starshiy inzh.-konstruktor Kolomenskogo
teplovozostroitel'nogo zavoda (for Yakovlev). 3. Vsesoyuznyy nauchno-is-
sledovatel'skiy institut elektrovostroyeniya (for Akimov).

BLINOVA, Z.A., kand. tekhn. nauk; VINITSKIY, L.Ye.; kand. tekhn. nauk;
YAKOVLEV, M.A., inzh.; AKIMOV, V.G., inzh.

Selecting rubber for the shock absorbers of the central support
cones of the VL60 locomotive. Trudy TSNII MPS no.267:107-
112 '63. (MIRA 16:11)

AKIMOV, V. I.: Master Tech Sci (diss) -- "The effect of the speed of movement and the weight of trains on the conditions for locating division points in designing railroad lines". Moscow, 1958. 16 pp (Moscow Order of Lenin and Order of Labor Red Banner Inst of Railroad Transport Engineers im I. V. Stalin), 150 copies (KL, No 2, 1959, 120)

AKIMOV, V.I., inzh.

Effect of train speed and weight on the conditions of locating
division points in planning railroads. Trudy MIIT no.118:119-138
'58.

(MIRA 12:2)

(Railroad engineering)

AKIMOV, V.I., inzh.

Economic evaluation of the use of nonstop train crossings at division points. Trudy MFT no.118:139-144 '58. (MIRA 12:2)
(Railroads--Crossings)

IOANNISYAN, A.I., prof.; GORINOV, A.V., prof.; AKIMOV, V.I., kand.tekhn.
nauk; KANTOR, I.I., kand.tekhn.nauk; KONDRATCHENKO, A.P., kand.
tekhn.nauk; SAVCHENKO, I.Ye., kand.tekhn.nauk; TURBIN, I.V., kand.
tekhn.nauk; VLASOV, D.I., inzh., red.; KHITROV, P.A., tekhn.red.

[Problems in the planning of railroads with electric and diesel
traction] Voprosy proektirovaniia zheleznykh dorog s elektri-
cheskoi i teplovoznoi tiagoi. Moskva, Gos.transp.shel-dor.izd-vo,
1959. 255 p. (MIRA 13:3)

1. Chlen-korrespondent AN SSSR (for Gorinov).
(Railroad engineering)

AKIMOV, V.I., kand.tekhn.nauk

"Traction analysis and calculations" by O.N.Isaakian, P.A.Gurskii.

Reviewed by V.I.Akimov. Vest. TSNII MPS 20 no.5:63-64 '62.

(MIRA 15:8)

1. Belorusskiy institut inzhenerov zheleznodorozhnogo transporta.

(Railroad engineering) (Isaakian, O.N.) (Gurskii, P.A.)

GORINOV, A.V., prof.; KANTOR, I.I., dots.; KONDRATCHENKO, A.P., dots.;
REPREV, A.I., dots.; TURBIN, I.V., dots.; LIVSHITS, V.N.,
kand. tekhn. nauk; AKIMOV, V.I., kand. tekhn. nauk,
retsenzent; GURSKIY, P.A., prof., retsenzent; ZAYTSEV, P.F.,
kand. tekhn. nauk, retsenzent; LISHTVAN, L.L., inzh.,
retsenzent; PRUSAKOV, M.B., inzh., retsenzent; SHINKAREV,
F.S., inzh., retsenzent; SHUL'PENKOV, V.M., inzh.,
retsenzent; MEDVEDEVA, M.A., ~~tekhn.~~ red.

[Design and planning of railroads] Proektirovanie zheleznnykh
dorog. [By] A.V.Gorinov i dr. Moskva, Transzheldorizdat,
1963. 308 p. (MIRA 16:9)

1. Chlen-korrespondent AN SSSR (for Gorinov).
(Railroad engineering)

AKIMOV, V. I., kand. tekhn. nauk; SALKO, L. I., inzh.

"Principles of railroad design" by A. E. Gibshman.
Reviewed by V. I. Akimov, L. I. Salko. Transp. stroi. 13 no.4:
Ap '63. (MIRA 16:4)

(Railroad engineering)
(Gibshman, A. E.)

NESTERENKO, N. I. (Minsk); ZAYTSEV, P. F., kand. tekhn. nauk (Minsk);
AKIMOV, V. I., kand. tekhn. nauk (Minsk); SHUL'PENKOV, V. M.,
inzh. (Minsk)

Prospects of the expansion of the White Russian Railroad.
Zhel. dor. transp. 45 no.1:49-51 Ja '63. (MIRA 16:4)

1. Glavnyy inzh. Belorusskoy dorogi (for Nesterenko).

(White Russia--Railroads)

AKIMOV, W.I., kand.tekhn.nauk (Gomel'); ZAYTSEV, P.F., kand.tekhn.nauk (Gomel');
POTAPENKOV, Z.I., kand.ekonom.nauk (Gomel'); SHUL'PENKO, V.M., inzh.
(Gomel'); SALKO, L.I., inzh. (Gomel')

Preparing a railroad line for high-speed traffic. Zhel.dor.transp.
47 no.10:55-57 0 '65. (MIRA 18:10)

AKIMOV, V. I., and FEDOROV, V. B.

"Determination of the true heat capacity of metals at high temperatures"

Seminar on production methods, physical properties, and electron structure of refractory materials, compounds, and alloys, organized by the Institute of Powder Metallurgy and Special Alloys AS Ukr SSR, Kiev, 25-29 April 1963. (Teplofizika vysokikh temperatur, No. 1, 1963, p. 156)

AKIMOV, V. I., NOVITSKIY, L. A. and TRUSHCHITSINA, L. V.

"Measuring of emissivity of solids at temperatures over 1000C"

Seminar on production methods, physical properties, and electron structure of refractory metals, compounds, and alloys, organized by the Institute of Powder Metallurgy and Special Alloys AS Ukr SSR, Kiev, 25-29 April 1963.
(Teplofizika vysokikh temperatur, No. 1, 1963, p. 156)

Akimov, V.I.

V.B. Fedorov, V.I. Akimov. Heat capacity of metals at high temperatures.

Title: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963)

Source: Atomnaya energiya, v. 15, no. 3, 1963, 266-267

Doc Med Sci

AKIMOV, V. I.

Dissertation: "Nerves of Thyroid Gland."
12/10/50

Acad Med Sci USSR

SO Vecheryaya Moskva
Sum 71

AKIMOV, V.I., professor (L'vov)

Clinical significance of angioreceptors of the thyroid gland.

Klin.med. 32 no.9:49-52 S '54.

(MIRA 7:12)

(THYROID GLAND, blood supply,
neural receptors of thyroid vessels)

AKIMOV, V.I., professor; ROTENBERG, D.L., doktor meditsinskikh nauk

Diagnosis of gastroduodenal hemorrhages. Khirurgia, Moskva,
no.1:16-18 Ja '55. (MLRA 8:9)

1. Iz kliniki obshchey khirurgii pediatricheskogo i sanitarno-
gigiyenicheskogo fakul'teta (zav.kafedroy prof. V.I. Akimov)
L'vovskogo meditsinskogo instituta (dir. prof. L.N. Kuz'menko)
(HEMORRHAGE,
duodenum & stomach, diag.)
(DUODENUM, hemorrhage,
diag.)
(STOMACH, hemorrhage,
diag.)

AKIMOV, V.I., professor (L'vov, ul. Mechnikova, d. 19a, kv.3); BOVA, S.M.

Diagnosis and treatment of ulcerous gastroduodenal hemorrhages.
Nov.khir.arkh. no.1:3-7 Ja-F '57. (MLRA 10:6)
(PEPTIC ULCER) (HEMORRHAGE)

AKIMOV, V.I., professor; BOVA, S.M.; MERENOV, V.V.

X-ray diagnosis in gastroduodenal hemorrhages. Vrach.delo no.6:
587-589 Je '57. (MLRA 10:8)

1. Klinika fakul'tetskoy khirurgii (zav. kafedroy - prof. V.I.
Akimov) sanitarno-gigiyenicheskogo i pediatricheskogo fakul'tetov
L'vovskogo meditsinskogo instituta
(HEMORRHAGE) (ABDOMEN--RADIOGRAPHY)

AKIMOV, V.I.; ALEKSEYENKO, I.P.; ALENT'YEVA, K.A.; AMOSOV, N.M.; ARUTYUNOV, A.I.;
BORTUS', V.D.; VASHCHENKO, I.D.; GELLERMAN, D.S.; GRISHIN, M.A.;
DANKHEYVA, T.N.; DENISOVA, A.G.; DOLGOVA, M.P.; IVANOV, N.A.; ISHCHENKO,
I.N.; KATS, V.A.; KOLOMIYCHENKO, M.I.; LAVRIK, S.S.; LIMAREV, A.A.;
NAZAROVA, N.G.; NOVACHENKO, N.P.; PETRUNYA, S.P.; PKHAKADZE, A.L.;
RUDENKO, F.A.; SERGIYEVSKIY, V.F.; TAYTSLIN, I.S.; TARTAKOVSKIY, B.S.;
CHIZHONOK, P.I.; SHALABALA, M.P.; SHUMADA, I.Y.; SHUPIK, P.L.

Konstantin Konstantinovich Skvortsov; obituary. Nov.khir.arkh.
no.3:142-143 My-Je '59. (MIRA 12:10)
(SKVORTSOV, KONSTANTIN KONSTANTINOVICH, 1871-1959)

AKIMOV, V.I. prof.; BOVA, S.M.

Total gastrectomy. Kaz.med.zhur. 40 no.4:34-37 Jl-Ag '59.

(MIRA 13:2)

1. Iz kafedry fakul'tetskoy khirurgii pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov (zav. - prof. V.I. Akimov) L'vovskogo meditsinskogo instituta 5-y gorodskoy klinicheskoy bol'nitsy (glav-vrach - I.I. Khoma).

(STOMACH--SURGERY)

AKIMOV, V.I., prof. [deceased]; KRIVITSKIY, D.I.

Surgical treatment of thyrotoxicosis. Klin. khir. no.3:50-53
'65. (MIRA 18:8)

1. Kafedra khirurgii I (zav. - prof. V.I.Akimov [deceased])
Kiyevskogo instituta usovershenstvovaniya vrachey.

BUSEV, A.I.; AKIMOV, V.K.

Complex halide compounds of osmium (IV) with pyrazolone derivatives.
Zhur.neorg.khim. 7 no.9:2071-2077 S '62. (MIRA 15:9)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Osmium compounds) (Pyrazolone)

BUSEV, A.I.; AKIMOV, V.K.

Use of diantipyrylpropylmethane for the photometric determination
of osmium in the presence of ruthenium. Zhur.anal.khim. 17 no.8:
979-984 N '62. (MIRA 15:12)

1. Lomonosov Moscow State University.
(Osmium Analysis) (Spectrophotometry)

BUSEV, A.I.; AKIMOV, V.K.

Gravimetric determination of osmium and iridium by means of some antipyrine derivatives. Vest.Mosk.un. Ser.2:Khim. 18 no.1: 43-47 Ja-F '63. (MIRA 16:5)

1. Kafedra analiticheskoy khimii Moskovskogo universiteta.
(Osmium--Analysis) (Iridium--Analysis) (Antipyrine)

BUSEV, A.I.; AKIMOV, V.K.

Complex compounds of iridium with some derivatives of pyrazolone
and their uses. Zhur.neorg.khim. 8 no.2:302-310 F '63.
(MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Iridium compounds) (Pyrazololinone)

BUSEV, A.I.; AKIMOV, V.K.; GUSEV, S.I.

Derivatives of pyrazolone as analytical reagents. Usp.khim. 34
no.3:565-583 Mr '65. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet, kafedra analiticheskoy
khimii.

BUSEV, A.I.; ZAYTSEV, B.Ye.; AKIMOV, V.K.

Structure of antipyrine compounds and its derivatives with
acido complexes of metals. Zhur. ob. khim. 35 no.9:1541 -
1551 S '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley i Moskovskiy gosudarstvennyy universitet.

ZAYTSEV, B.Ye.; AKIMOV, V.K.; BUSEV, A.I.; GUSEV, S.I.

Structure of pyramidon complexes with metals. Zhur.ob.khim. 35
no.12:2119-2123 D '65. (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley i Moskovskiy gosudarstvennyy universitet im. Lomono-
sova. Submitted November 16, 1964.

AKIMOV, V.M.; KLYACHKO-GURVICH, A.L.; RUBINSHTEYN, A.M.;
SIMULIN, Yu.N.; SLINKIN, A.A.; SEMINA, R.T.

Study of catalysts for ammonia synthesis with different
degrees of reduction. Izv. AN SSSR. Ser. khim. no.12:2208-
2210 D '63. (MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

AKIMOV, V.M.; SHUYKIN, N.I.; KASHKOVSKAYA, L.K.; KONONOV, N.F.

Phase transitions in the process of regeneration of the nickel-
magnesium-aluminum oxide spinel catalyst. Izv. AN SSSR Ser.khim.
no.10:1862-1863 O '63. (MIRA 173)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SHUYKIN, N.I.; KONONOV, N.F.; KASHKOVSKAYA, L.K.; AKIMOV, V.M.

Catalytic hydrodealkylation of polyalkyl benzenes. Part 4: Demethylation of toluene on catalysts of the Ni - MgO . Al₂O₃ composition. Zhur.ob.khim. 33 no.12:3871-3875 D '63. (MIRA 17:3)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

CHERKEZ, Abram Yakovlevich; ABRAMOVICH, G.N., doktor tekhn. nauk, retsenzent; AKIMOV, V.M., kand. tekhn. nauk, retsenzent; KOTLYAR, Ya.M., kand. tekhn. nauk, nauchn. red.

[Using the method of minor deviations in designing gas-turbine engines] Inzhenernye raschety gazoturbinnnykh dvigatelei metodom malykh otklonenii. Moskva, Mashinostroenie, 1965. 354 p. (MIRA 18:12)

AKIMOV, V.M.; ULITIN, O.A.

Determining the acid number of vegetable oils by means of potentiometric titration. Izv.vys.ucheb.zav.; pishch.tekh. no.5:162-166 '58. (MIRA 11:11)

1. Krasnodarskiy institut pishchevoy promyshlennosti, Kafedra fizicheskoy i kolloidnoy khimii.
(Oils and fats, Edible) (Potentiometric analysis)

SOV/62-58-8-3/22

AUTHORS: Rubinshteyn, A. M., Akimov, V. M., Kretalova, L. D.

TITLE: The Properties and the Structure of $\text{NiO-Al}_2\text{O}_3$ -Catalysts
(Svoystva i struktura $\text{NiO-Al}_2\text{O}_3$ -katalizatorov) Note 2:
The Radiographic Investigation of the Influence of the Interaction of the Components and of the Conditions of Thermal Treatment on the Phase Composition and Crystalline Structure (Sobshcheniye 2. Rentgenograficheskoye izucheniye vliyaniya sootnosheniya komponentov i usloviy termicheskoy obrabotki na fazovyy sostav i kristallicheskuyu strukturu)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 8, pp. 929-936 (USSR)

ABSTRACT: The investigation of the activity and effective selectivity in the reaction of the decomposition of $i\text{-C}_3\text{H}_7\text{OH}$ $\text{NiO-Al}_2\text{O}_3$ -catalysts described in the previous paper (Ref 1) furnished the proof of the interaction of the components in solid $\text{NiO-Al}_2\text{O}_3$ -catalysts. Therefore it was assumed that they exhibit a phase structure. This assumption needed, however,

Card 1/4

SOV/62-58-8-3/22

The Properties and the Structure of $\text{NiO-Al}_2\text{O}_3$ -Catalysts. Note 2: The Radiographic Investigation of the Influence of the Interaction of the Components and of the Conditions of Thermal Treatment on the Phase Composition and Crystalline Structure

checking and proving by means of physical methods of investigation. Especially the detailed radiographic investigation of the $\text{NiO-Al}_2\text{O}_3$ -catalysts could remove the deviation of the results (preliminary work of the authors and investigations carried out by Milligan and Merten (Ref 2), and Milligan and Richardson (Ref 3)). The first important result obtained from this work was that the authors found that among the catalysts investigated no amorphous ones were detected. Thus, the data supplied by Milligan and Merten could not be disproved in any way. They also found that the X-ray structural measurements showed the crystalline structure of the commonly precipitated catalysts $(\text{pH}8)\text{NiO-Al}_2\text{O}_3$ containing from 0 to 100 molar % of NiO (in contrast to those catalysts described by Milligan and Merten (Ref 2)). It was shown that the conditions of production exert a greater influence on the structure of the catalysts than the quantitative correlation of the components. It was also

Card 2/4

SOV/62-58-8-3/22

The Properties and the Structure of NiO-Al₂O₃-Catalysts. Note 2: The Radiographic Investigation of the Influence of the Interaction of the Components and of the Conditions of Thermal Treatment on the Phase Composition and Crystalline Structure

found that catalysts of less than 50 molar % of NiO are monophase and do not have a free NiO. By measuring the parameter of the crystal lattice and of the occurring modifications in the concentration of NiO it was found that these monophase catalysts consist of a spinel solution of NiAl₂O₄ (in excess γ -Al₂O₃). The catalytic properties of NiO-Al₂O₃ were compared to the data of the phase and structural analyses. It turned out that there exist optimum parameters of the spinel lattice within the range of from 7.90 to 7.95 Å (for the dehydration). There are 1 figure, 3 tables, and 13 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR)
Card 3/4

SOV/62-58-8-3/22

The Properties and the Structure of $\text{NiO-Al}_2\text{O}_3$ -Catalysts. Note 2: The Radio-
graphic Investigation of the Influence of the Interaction of the Components
and of the Conditions of Thermal Treatment on the Phase Composition and
Crystalline Structure

SUBMITTED: March 8, 1957

Card 4/4

> (4)

AUTHORS:

Rubinshteyn, A. M., Minachev, Kh. M.
Akimov, V. M.

SOV/79-29-8-10/81

TITLE:

The Dependence of the Distribution of Platinum in the Impregnated Pt-C Catalyst on the Concentration of the Initial Solution H_2PtCl_6 and on the Nature of Carbon Granulation

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2503 - 2508 (USSR)

ABSTRACT:

The authors previously made a radiographic investigation of the penetration of platinum into the catalyst grain of the platinized carbon having different grain size (Ref 1); however, the determinations were not carried out accurately. Besides, the fibrous structure of the carbon obstructed exact density measurements on the photographs. The photorecording method was therefore abandoned, and the ionization method, according to the X-ray apparatus URS-50-I, was used under strict conditions of comparison. These experiments were further intended to explain whether the depth of platinum penetration into the carbon depends on the concentration of the initial solutions. The distribution of the platinum in the carbon grain was determined in the impregnated Pt-C catalysts according to the absorption

Card 1/2

The Dependence of the Distribution of Platinum in the SOV/79-29-8-10/81
Impregnated Pt-C Catalyst on the Concentration of the
Initial Solution H_2PtCl_6 and on the Nature of Carbon Granulation

of X-rays which had been measured by the above ionization method. These catalysts contained 20.4 and 2% platinum, and the grain sizes of the carbon amounted to 2-10 mm. It was confirmed that the concentration of platinum decreased from the surface inward, and it was ascertained that with the decrease of the concentration of platinum in the initial solution, the concentration gradient of the platinum also decreases as the latter penetrates into the grain (i.e. that the diluted solutions yield catalysts with better distribution of the metal). The catalytic activity in the various dehydrogenations of cyclohexane and in the hydrogenation of benzene was also determined. The corresponding results are tabulated. There are 4 figures, 1 table, and 3 Soviet references.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)
SUBMITTED: July 14, 1958
Card 2/2

5(2,3)

AUTHORS:

Rubinshteyn, A. M., Afanas'yev, V. A., SOV/20-124-5-32/62
Akimov, V. M., Pribytkova, N. A., Slovetskaya, K. I.

TITLE:

The Influence of the Composition and of the Conditions of the Thermal Treatment on the Structure and Catalytic Activity of Al_2O_3 - ZrO_2 Catalysts (Vliyaniye sostava i usloviy termicheskoy obrabotki na strukturu i kataliticheskuyu aktivnost' Al_2O_3 - ZrO_2 -katalizatorov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 1076-1079 (USSR)

ABSTRACT:

The authors are not aware of publications on results of systematic changes of the ratio of components or of the conditions of the thermal treatment nor on the determination of the specific activity of the catalysts mentioned in the title. They have investigated the decomposition of absolute isopropyl alcohol on such catalysts which had been produced by precipitation with 10 % ammonia from 10 % solutions of Al- and Zr-nitrate at room temperature and pH 8.7-9.5. During the calcining of samples of the catalysts at 400, 600, and 750° it was found that the dehydration of the hydroxide is already

Card 1/4

The Influence of the Composition and of the Con- SOV/20-124-5-32/62
 ditions of the Thermal Treatment on the Structure and Catalytic Activity of
 Al_2O_3 - ZrO_2 Catalysts

sufficient at 400°. The catalysts consist of oxides. The additional removal of water at 750° was only as much as 2 % which had still remained adsorbed. The values of the velocity constant K of the reaction were calculated from the equation

$$K = \frac{Nm}{M - m/2} \text{ (Ref 5) and the specific activity } A_{sp} \text{ (Table 1)}$$

was calculated from K and S (specific surface area). Figure 1 shows the calculated S values (Ref 6). This indicates that the catalysts had a very highly developed surface and a fairly high thermal stability. This expresses the mutual protection afforded by the components before crystallization (sintering).

Figure 2 shows the change in the porous structure of the catalysts during calcining. Said catalysts were already active at 230° whereas ZrO_2 alone reaches the same activity only at

300°. Table 1 states the degrees of conversion between 245 and 260°. Only a dehydration of $i\text{-C}_3\text{H}_7\text{OH}$ took place on all binary

catalysts. The increase in activity was clearly due in this case to high S values of the binary catalysts compared to

Card 2/4

The Influence of the Composition and of the Con- SOV/20-124-5-32/62
ditions of the Thermal Treatment on the Structure and Catalytic Activity of
 $\text{Al}_2\text{O}_3\text{-ZrO}_2$ Catalysts

Al_2O_3 . It can be concluded that the addition of ZrO_2 does not result in an activation of Al_2O_3 under the conditions given. Figure 3 shows a diagram - the variation of A_{sp} with the composition and the calcining temperature of the catalysts (1-750°, 2-600°, 3-400°) - for experiments carried out at 260°. The fact that A_{sp} is constant throughout a wide range of ZrO_2 concentrations seems to indicate that the reaction is taking place in this case only on Al_2O_3 whereas ZrO_2 behaves only as an inert support. All this is in good agreement with the results of the X-ray analysis (made with the assistance of L. D. Kretalova). It has been found that in co-precipitated catalysts ZrO_2 and Al_2O_3 are present as separate phases rather than solid solutions (in agreement with reference 4). Neither the increase of the temperature at which the experiment was carried out (up to 320°), nor of the volume velocity (up to

Card 3/4

The Influence of the Composition and of the Con- SOV/20-124-5-32/62
ditions of the Thermal Treatment on the Structure and Catalytic Activity of
 $\text{Al}_2\text{O}_3\text{-ZrO}_2$ Catalysts

12h^{-1}) have destroyed, on the whole, the picture of figure 3 nor affected the conclusions derived therefrom in table 1. This relates to the catalysts calcined at 600° . The total activity (Table 1) and A_{sp} increase with the calcining temperature between 400 and 600° (Fig 3) probably because the finest pores are destroyed, which are difficultly accessible to the alcohol molecules. There are 3 figures, 1 table, and 6 references, 4 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

PRESENTED: October 17, 1958, by A. A. Balandin, Academician

SUBMITTED: April 19, 1958

Card 4/4

5.1190

78060

SOV/62-60-1-6/37

AUTHORS:

Rubinshteyn, A. M., Slovetskaya, K. I., Akimov, V. M.,
Pribytkova, N. A., Kretalova, L. D.

TITLE:

Polymorphism and Catalytic Properties of Al_2O_3

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1960, Nr 1, pp 31-38 (USSR)

ABSTRACT:

Polymorphic modifications of Al_2O_3 and their catalytic
properties were studied. Preparation of γ -, α -,
 χ -, κ -, θ -, δ - Al_2O_3 modifications is given. It
was shown that formation of different Al_2O_3 modifications
depends not only on the thermal conditions of dehydration,
but also on the structure of the starting aluminum
hydroxide. The following three series of conversions
are given:

Card 1/3

Polymorphism and Catalytic Properties
of Al_2O_3

78060

SOV/62-60-1-6/37

- (a) Hydrargillite $\rightarrow \chi(k', s) \cdot Al_2O_3 \rightarrow k \cdot Al_2O_3 \rightarrow \alpha \cdot Al_2O_3$
 (b) Bayerite } $\rightarrow \gamma(\eta) \cdot Al_2O_3 \rightarrow \delta \cdot Al_2O_3 \rightarrow \theta \cdot Al_2O_3$
 (c) Boehmite } $\rightarrow \alpha \cdot Al_2O_3$
 (d) diaspore $\rightarrow$

General and specific catalytic activity of the above modifications was determined by using them in catalytic dehydration of $1-C_3H_7OH$. The general catalytic

activity of the modifications changes with the change of specific surface. According to their specific catalytic activity the modifications (containing the same amount of residual water per $1 m^2$ of surface)

form the following series: $\Theta > \chi > \kappa > \gamma (< \delta) \gg \alpha$.

Activity of some modifications prepared at high temperatures is higher than that of modifications prepared at lower temperatures. X-ray studies show that in the catalytic experiments the modifications

Card 2/3

Polymorphism and Catalytic Properties
of Al_2O_3

78060
SOV/62-60-1-6/37

retain their structural characteristics. There are 2 tables; 4 figures; and 17 references, 6 U.S., 1 U.K., 1 French, 5 German, 4 Soviet. The 5 most recent U.S. and U.K. references are: H. C. Stumpf, A. S. Russell, I. W. Newson, C. M. Tucker, *Industr. and Engng. Chem.* 42, 1938 (1950); J. F. Brown, D. Clark, W. Elliot, *J. Chem. Soc.*, 84 (1953); M. K. Day, V. F. Hill, J. *Phys. Chem.* 57, 946 (1953); A. S. Russell, C. N. Cochran, *Industr. and Engng. Chem.* 42, 1336 (1950); W. Br y, R. Krieger, *J. Am. Chem. Soc.*, 71, 3637 (1949).

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry Academy of Sciences USSR (Institut organicheskoy khimii imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: May 5, 1958

Card 3/3

AKIMOV, V.M.

Some data on the crystals of diacetylmercury and α -aminoisopropyl-phosphonic acid monohydrate. Kristallografiia 5 no. 6:950-953
N-D '60. (MIRA 13:12)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo.
(Propanone) (Phosphonic acid)

RUBINSHTEYN, A.M.; KLYACHKO-GURVICH, A.L.; AKIMOV, V.M.

Phase composition and texture of alumina-chromium oxide catalysts
prepared by coprecipitation. Izv.AN SSSR.Otd.khim.nauk no.5:780-
788 My '61., (MIRA 14:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Alumina) (Chromium oxide)

AKIMOV, V.M.; SLINKIN, A.A.; RUBINSHTEYN, A.M.; SHUYKIN, N.I.;
KONONOV, N.F.; KASHKOVSKAYA, L.K.

Effect of spinel formation on the regenerative capacity of the
Ni - A_2O_3 catalyst. Izv. AN SSSR. Otd.khim.nauk no.8:1516-
1518 Ag 1961. (MIRA 14:8)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Spinel) (Catalysts)

RUBINSHTEYN, A.M.; PRIBYTKOVA, N.A.; AKIMOV, V.M.; KRETALOVA, L.D.;
KLYACHKO-GURVICH, A.L.

Effect of alkali metal oxides on the activity, selectivity, and
phase composition of binary catalysts based on Al_2O_3 . Izv. AN SSSR.
Otd.khim.nauk no.9:1552-1558 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Alkali metal oxides) (Catalysts)

AKIMOV, V.M.; LITVIN, Ye.F.; RUBINSHTEYN, A.M.; FREYDLIN, L.Kh.

Phase transitions during the preparation of Ni-MgO catalysts
by the decomposition of oxalates in a hydrogen stream. Izv.AN
SSSR.Otd.khim.nauk no.10:1892-1894 0 '61. (MIRA 14:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nickel oxalate) (Magnesium oxide)

SHUYKIN, N.I.; KONONOV, N.F.; KASHKOVSKAYA, L.K.; AKIMOV, V.M.

Catalytic hydrodealkylation of polyalkyl benzenes.
Part 3: Demethylation of toluene on nickel-alumina
catalysts. Effect of nickel concentration. Zhur.ob.khim.
32 no.11:3595-3599 N '62. (MIRA 15:11)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo
AN SSSR.

(Toluene) (Nickel catalysts) (Methyl group)

AKIMOV, V.M. (Stalino)

Pine plantings in sandy soils. Put' i put.khoz. 5 no.8:34-35
Ag '61. (MIRA 14:10)
(Windbreaks, shelterbelts, etc.)

GNILOVSKOY, V.G., inzh.; AKIMOV, V.M., inzh.

New drills equipped with dust collectors. Gor.zhur. no.5:54-56
My '62. (MIRA 16:1)

1. Zavod "Pnevmatika", Leningrad.
(Boring machinery) (Dust collectors)

LACHINOV, S.S.; RUBINSHTEYN, A.M.; AKIMOV, V.M.; KLYACHKO-GURVICH, A.L.;
KONYUKHOVA, I.N.; KUZNETSOV, L.D.; LEVITSKAYA, T.T.; PRIBYTKOVA, N.A.;
SLINKIN, A.A.; CHESNOKOVA, R.V.

Complex investigation of iron catalysts for ammonia synthesis.
Kin. i kat. 5 no.3:478-489 My-Je '64.

(MIRA 17:11)

1. Institut organicheskoy khimii AN SSSR i Gosudarstvennyy institut
azotnoy promyshlennosti.

L 52349-65

ACCESSION NR: AP5011683

2

one of the first was the "control" series and the other the other

L 57249-05

ACCESSION NR: AP5011683

ENCLOSURE: 01

Table 1

ACC NR: AP7002556 (A,N) SOURCE CODE: UR/0413/66/000/023/0037/0037

INVENTOR: Buyvol-Kot, Yu.I.; Chuprov, M.Ye.; Tsybayev, B.G.; Akimov, V.M.

ORG: none

TITLE: Dipole-slot antenna. Class 21, No. 189032

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 37

TOPIC TAGS: slot antenna, dipole antenna, waveguide antenna

ABSTRACT: An Author Certificate has been issued for a dipole-slot antenna which comprises a symmetrical dipole and a waveguide slot radiator in the form of a shortcircuited section of a rectangular waveguide. To secure separate reception or transmission of mutually perpendicular electromagnetic signals in a wide range of frequencies, the symmetrical dipole is placed above the waveguide slot radiator in parallel to the slot.

SUB CODE: 09/ SUBM DATE: 18Mar65 / ATD PRESS: 5113

Card 1/1

UDC: 621.396.677.71

40839

S/535/62/000/147/005/010
1011/1211

AUTHOR: Akimov, V. N., Engineer
TITLE: About one error of the compensating accelerometer
SOURCE: Moscow. Aviatsionny institut. Trudy, no. 147, 1962. Navigatsionnyye i giroskopicheskiye ustroystva, 45-50

TEXT: The displacement of the moving part of the accelerometer is transformed into voltage, amplified and the amplifier output current flows through a compensating coil which is fixed to the moving part and is placed in a constant magnetic field. The resulting force compensates the force that caused the displacement. The compensating current is a measure of the acceleration and is directly proportional to it. When current flows in the compensating coil it changes the magnetic induction in the air gap thus varying the proportionality factor between the current and the acceleration. This variation is considerable when the accuracy desired is better than 1 %. The transfer function (proportionality factor) is expanded in a Taylor series around the zero value of the compensating current, and only the two first members are taken. It is then shown that there is a square law dependence of the current on the acceleration. An estimated expression for the coefficient of the square member is evaluated, but it is suggested that it is better to measure it. Another coil is added in series with the compensating one so that the two magnetic fluxes oppose each other. The number of turns in the additional coil (which is fixed on the permanent magnet) is somewhat higher than in the compensating

Card 1/2

About one error of...

S/535/62/000/147/005/010
1011/10211

coil. A variable resistor is added in parallel to the additional coil to regulate its magnetic flux. This compensating scheme has been tested experimentally and yielded good results. All square-law errors are eliminated. The experimental results are shown on a graph to give absolute errors of less than $.5 \times 10^{-4}$ cm/sec² in the interval of accelerations of $-g \dots +g$. There are 3 figures and a table of some basic properties of different magnetic materials.

Card 2/2

40842

S/535/62/000/147/008/010
1011/1211

2425
AUTHOR: Akimov, V. N., Engineer

TITLE: An estimate of the dynamic accuracy of some systems

SOURCE: Moscow. Aviatsionnyy institut. Trudy, no. 147. 1962. Navigatsionnyye i giroskopicheskiye ustroystva. 72-75

TEXT: The academician V. S. Kulebakin [Ref. 2: Trudy vsesoyznogo soveshchaniya poteyorii avtomaticheskogo regulirovaniya, ch. II, AN SSSR, 1955 (Proceedings of the all-Union conference on automatic control theory, part II, AS USSR, 1955)] showed that the transfer function of a system has to have a certain operator $K(\rho)$ (that depends on the forcing function) as its multiplier in order that the steady-state error of the system be zero.

A system consisting of a section with a transfer function given by

$$\Phi(\rho) = \frac{P(\rho)}{Q(\rho)} \quad (1)$$

($P(\rho)$ and $Q(\rho)$ are polynomials in ρ ; the numerator power is lower than that of the denominator; $Q(\rho)$ is a Hurwitz polynomial) that transforms the input forcing function $X(t)$ into the output $y(t)$ and of an integrator that operates on $y(t)$ is investigated. The transient error of the system is estimated by

Card 1/2

AKIMOV, Valentin Nikolayevich [deceased]; APAROV, Boris Petrovich, [deceased]; BALAGUROV, Vladimir Aleksandrovich; GALTAYEV, Fedor Fedorovich; KOROBAH, Nikolay Timofeyevich; LARIONOV, Andrey Nikolayevich, redaktor; MASTYAYEV, Nikolay Zosimovich; SENKEVICH, A.M., redaktor; SKVORTSOV, I.M., tekhnicheskii redaktor.

[Principles for the electric equipment of airplanes and automobiles] Osnovy elektrooborudovaniia samoletov i avtomashin. Pod red. A.N.Larionova. Moskva, Gos.energ.izd-vo, 1955. 384 p. (MLRA 8:12)

1. Chlen korrespondent AN SSSR (for Larionov)
(Airplanes--Electric equipment) (Automobiles--Electric Equipment)

AKIMOV, V.N.

Angina and related diseases. Kaz. med. zhur. no.6:65-71 N-D '63.
(MIRA 17:10)

1. Kafedra bolezney ukha, gorla i nosa (zav. - prof. N.N. Lozanov)
Kazanskogo meditsinskogo instituta i otorinolaringologicheskoye
otdeleniye Kazanskoy respublikanskiy klinicheskoy bol'nitsy (glavnyy
vrach - K.L. Svechnikov).

AKIMOV, V.N.; LOZANOV, N.N.

Prophylaxis of allergy. Nauch. trudy Kaz. gos. med. inst.
14:341-343 '64. (MIRA 18:9)

1. Kafedra otorinolaringologii (zav. - prof. N.N.Lozanov)
Kazanskogo meditsinskogo instituta i otorinolaringologicheskoye
otdeleniye Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach
K.L.Svechnikov) Ministerstva zdravookhraneniya Tatarskoy ASSR.

AKIMOV, V.P., inzh.

Throughs and track signs made with reinforced concrete. Put' put.khoz.
6 no.628-30 '62. (MIRA 15:7)

1. Zamestitel' nachal'nika Vyborgskoy distantzii puti Oktyabr'skoy
dorogi.

(Railroads--Buildings and structures)
(Reinforced concrete construction)

AKIMOV, V. S.

K. A. Sokolova and V. S. Akimov "Penicillin Therapy for Suppurative Diseases of the Skin and Subcutaneous Cellular Tissue in New Born Babies," Akusher. i Ginekol., No. 5, 1949. Maternity Home, Sverdlovsk Rayon and 2nd Clinic, Chair Obstet. & Gynecol., 1st Leningrad Med. Inst.

AKIMOV, V. S., ZHERDEVA, L. G., KARASEVA, A. A., VOZNESENSKAYA, E. V.,
ALTSHULER, A. E., KROL, B. B., OROCHKO, D. I., MIKHAYLOV, B. B., AGAFONOV, A. V.,
DRUZHININA, A. V.

"Production of Lubricating Oils and Paraffin from Sulfurous Oils
in the USSR."

Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June 1959. New York City.

KRASYUKOV, A.F.; AKIMOV, V.S.; SHEPSHELEVICH, M.I.; SLUTSKAYA, S.M.;
KOLESNIKOV, A.M.; KADBAIYUK, N.S.

Delayed coking of heavy petroleum residues. Trudy BashNII NP
no.1:63-79 '59. (MIRA 12:6)
(Petroleum coke)

KREYN, S.E.; GOL'DBERG, D.O.; AKIMOV, V.S.; YEVDOKIMOV, O.P.; ABRAMOVICH, S.Sh.

Additional means for increasing the output of high-quality
lubricating oils. Khim.i tekhn. topl.i masel 4 no.2:4-10
F '59. (MIRA 12:2)

(Lubrication and lubricants)

KRASYUKOV, A.F.; AKIMOV, V.S.; SYUNYAYEV, Z.I.; SHEPSHELEVICH, M.I.

Some aspects of the mechanism of coking. Trudy Bash. NII
NP no.3:101-118 '60. (MIRA 14:4)
(Petroleum coke)

GOL'DBERG, D.O.; KREYN, S.E.; AKIMOV, V.S.; ABRAMOVICH, S. Sh.; YEVDOKIMOV, O.P.;
FATKULLINA, N.S.; KULINICHEVA, M.A.

Relation between the physicochemical properties and performance
characteristics of residual oils from sulfur-bearing crudes and
the depth of phenol extraction. Trudy Bash NII NP no.3:69-81 '60.
(MIRA 14:4)

(Lubrication and lubricants—Testing)
(Petroleum—Refining)

CHERNYSH, M.Ye; CHEREK, M.I.; AKIMOV, V.S.; SABADASH, Yu.S.

Setting a combined system for the thermal reforming of straight-run gasoline from lightly cracked tar at the units of thermal cracking. Khim.i tekhn.topl.i masel 6 no.1:6-11 Ja '61.
(MIRA 14:1)

1. Upravleniye Bashneftekhimzavody i Bashkirskiy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti.
(Gasoline) (Cracking process)

AKIMOV, V.S.; KOSTRIN, K.V.; KREYMER, M.L.; SABADASH, Yu.S.

Rebuilding pressure vacuum distillation thermal cracking units in
the Bashkir petroleum refineries. Khim. i tekhn. topl. i masel 6
no.11:11-14 N '61. (MIRA 14:12)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

(Bashkiria--Petroleum refineries--Equipment and supplies)

AKIMOV, V.S.; DADAYAN, G.T.; OL'KOV, P.L.

Increasing the effectiveness of the washing of a lump of fairly oil-free paraffin in the cylinders of the vacuum filters in dewaxing units. Trudy Bash NIINP no.5:110-117 '62. (MIRA 17:10)

AKIMOV, V.S.; CHEREK, I.I.; KRUGLIKOVA, O.S.

Intensifying the deoiling of fairly oil-free paraffins and petrolatums
and the dewaxing of oils. Trudy Bash NIINP no.5:117-130 '62.
(MIRA 17:10)

AKIMOV, V.E.; KOSTIN, K.V.; KREYMER, M.L.; SARADASH, Yu.S.

Remodeling pressure-vacuum and thermal cracking devices.

Trudy BashNII NP no.6:271-278 '63.

(MIRA 17:5)

AKIMOV, V.S.; SOBOLEV, B.A.; SUSHKO, L.G.

Redistribution of the feed of a solvent and recirculation
filtrate in the dewaxing of raffinate. Nefteper. i neftekhim.
no. 4:14-17 '64. (MIRA 17:5)

1. Ufimskiy neftepererabatyvayushchiy zavod im. XXII s"yezda
Kommunisticheskoy partii Sovetskogo Soyuza.

AKIMOV, V.S.; ABRAMOVICH, S.Sh.; KREYMER, M.L.; YEFREMOVA, M.I.;
MARKEYEVA, L.I.; FOMINA, O.I.

High-viscosity distillates as an additional resource in the
production of motor oils. Trudy BashNII NP no.6:24-34 '63.
(MIRA 17:5)

AKIMOV, V.S.; GOL'DBERG, D.O.; YEFREMOVA, M.I.

Effect of the acetone content in a solvent on dewaxing.
Trudy BashNII NP no.6:112-122 '63. (MIRA 17:5)

AKIMOV, V.S.; ABRAMOVICH, S.Sh.; MINKAYROVA, S.S.

Laboratory investigation of the combined dewaxing and deoiling
of raffinates from Tuymazi oil and a mixture from Volgograd oil.
(MIRA 17:9)
Trudy BashNII NP no.7:46-52 '64.

AKIMOV, V.S.; ABRAMOVICH, S.Sh.; SMIRNOVA, N.I.

Effect of the intensity of the mixing of cooled raffinate
solutions on their dewaxing. Trudy BashNII NP no.7:53-55 '64.
(MIRA 17:9)

AKIMOV, V.T., inzh.; KIBIREV, V.N., inzh.; SHUKAYLO, V.F., kand. tekhn. nauk

Statistical analysis of the reliability and reconditioning of
mine haulage equipment. Izv. vys. ucheb. zav.; gor. zhur. 7
no.5:88-97 '64. (MIRA 17:12)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki
i vychislitel'noy tekhniki. Rekomendovana kafedroy gornykh
mashin i rudnichnogo transporta.

AKIMOV, V.T., inzh.; KIBIREV, V.N., inzh.; SHUKAYLO, V.F., kand. tekhn. nauk

Determining the optimal norms for the life of mine haulage equipment.
Izv.vys.ucheb.zav.;gor.zhur. 7 no.6:74-82 '64. (MIRA 17:12)

1. Khar'kovskiy institut gornoy mekhaniki, avtomatiki i vychislitel'noy tekhniki. Rekomendovana kafedroy mashin i rudnichnogo transporta.

10281-66	EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b)	MJW/JD
ACC NR: AP5027709	SOURCE CODE: UR/0129/65/000/011/0031/0033	
AUTHOR: <u>Prokoshkin, D. A.</u> ; <u>Vasil'yeva, A. G.</u> ; <u>Akimov, V. V.</u>		
ORG: <u>MVTU im. Bauman</u>		
TITLE: The strength and ductility of alloy steels subjected to low-temperature thermochemical treatment.		
SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1965, 31-33.		
TOPIC TAGS: steel, alloy steel, structural steel, steel treatment, heat treatment, thermomechanical treatment, anforming*, steel anforming*, low temperature treatment, steel property/VL1 steel, VL1D steel, VKS1 steel, 40Kh SNVF steel		
ABSTRACT: The effect of low-temperature thermomechanical treatment (LTTMT) on the mechanical properties of a series of medium- and high-alloy structural steels has been investigated. Six complex-alloyed steels, <u>VL-1</u>, <u>VL1D</u>, <u>VKS1</u>, <u>40KhGSNMF</u>, <u>40KhSNVF</u> and <u>40Kh5NSMF</u>, containing 0.3—0.46% C, 1.4—5.2% Cr, 0.81—2.26% Ni, 0—1.5% Mo, 0.55—1.38% Mn, 0.86—1.32% Si, 0—0.8% V, and 0—1.2% W, were austenitized at 900—1030C, cooled to 550—500C, rolled in one, two, and five or ten passes with respective reductions of 20, 40, and over 85% (with reheatings in 5 and 10 pass rolling), oil quenched, and tempered at 200, 250, or 260C. It was found that LTTMT significantly reduced the block size in all the investigated steels. After the LTTMT, the tensile strength of all steels was 60—80 kg/mm² higher than that of conventionally heat-treated steels: from 179 to 225 kg/mm² for		
Card 1/2	UDC: 620.178:3:669.15-194:66.046	

L 10281-66

ACC NR: AP5027709

VL1 steel and from 200 to 276 kg/mm² for 40KhSNV steel. The increases in the yield strength and elongation ranged from 4 to 69 kg/mm² and from 0.5 to 2.2%, respectively. The most significant increase in the tensile strength occurred at low and very high reductions. The elongation increased with increasing reductions up to 60% and decreased with higher reductions. Tempering at temperatures up to 550C does not annihilate the beneficial effect of LTMT. In all steels after the LTMT, the ductility was lower (by about 3%) and the resistance to plastic deformation was higher (by 8—13 kg/mm²) in the direction transverse to that of rolling. Orig. art. has: 4 figures and 4 tables. [MS]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4/66

Card 2/2

AKIMOV, V.V.

PAGE 1 FOR REPRODUCTION 50/1995

Vsesoyuznoye soveshchaniye po fiziko-khimicheskoy teorii stekla, Leningrad, 1959.
Stekloobrazovaniye sostoyaniye: trudy Tret'ego vsesoyuznogo soveshchaniya Leningrad,
16-20 noyabrya 1959 (Vitreous State): Transactions of the Third All-Union Con-
ference on the Vitreous State, Held in Leningrad on November 16-20, 1959) Moscow,
1960. 524 p. Errata ally inserted. 3,200 copies printed.
(Series: Isa: Trudy)

Sponsoring Agencies: Institut khimii silikatov Akademii nauk SSSR, Vsesoyuznoye
khimicheskoye obshchestvo imeni D.I. Mendeleeva and Gosudarstvennyy ordena
Lenina opticheskoy institut imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Barzakovskiy, M.A. Bezhorodov, O.K. Potvinik,
V.V. Vargis, A.G. Vlasov, E.S. Yevstrop'yev, A.A. Lebedev, M.A. Matveyev, V.S.
Molchanov, R.I. Nyul'er, Ye.A. Poryy-Kozits, Chairman, M.A. Toropov, V.A.
Plorinskaya, A.K. Yabinski; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.:
V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of
glasses.

CONTENTS: The book contains the reports and discussions of the Third All-Union
Conference on the Vitreous State, held in Leningrad on November 16-20, 1959.
They deal with the methods and results of studying the structure of glasses, the
relation between the structure and properties of glasses, the nature of the
chemical bond and glass structure, and the physicochemical properties of glasses.
silica, mechanism of vitrification, optical properties and glass structure, and
the electrical properties of glasses are also discussed. A number of the re-
ports deal with the dependence of glass properties on composition, the tinting of
glasses and radiation effects, mechanical, technical, and chemical prop-
ties of glasses. Other papers treat glass semiconductors and soda borosilicate
glasses. The Conference was attended by more than 300 delegates from Soviet and
East German scientific organizations. Among the participants in the discussion
were N.V. Solzhen, Ye. V. Vorobinskiy, Yu.A. Gusev, V.P. Pryanishnikov, I.V.
Gorbil, O.P. Medvedev, G.P. Mikheylov, S.M. Petrov, V.P. Lazarev, G.V.
Larin, A.V. Shalov, M.T. Plushchinskii, A.Ya. Kuznetsov, E.V. Degtyareva, Ya.A.
Byruginovskaya, M.A. Kozlov, M.K. Skorniyakov, P.Ya. Rodin, E.K. Kozlovskaya,
Kuznetsov, V.P. Podyav, R.S. Savelievich, Z.G. Pankov, and O.S. Kityagorodskiy.
The final session of the Conference was addressed by Professor I.I. Kityagorodskiy,
Honored Scientist and Engineer, Doctor of Technical Sciences. The following
institutes were cited for their contribution to the development of glass science
and technology: Gosudarstvennyy opticheskoy institut (State Optical Institute),
Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR),
Fizicheskoy institut AN SSSR (Physics Institute AS USSR), Fiziko-tekhnicheskoy
institut AN SSSR (Physicochemical Institute AS USSR), Institut fiziki AN SSSR,
Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk),
Laboratoriya fizikal'noy khimii silikatov AN SSSR (Laboratory of Physical Chemistry
of Silicates of the Institute of General and Inorganic Chemistry,
Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnoy
fiziki AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstven-
nyy institut stekla (State Institute for Glass Fibers), Gosudarstvennyy institut elektrotek-
hnicheskoy stekla (State Institute for Electrical Glass), Sibirskiy fiziko-
tekhnicheskoy institut, Tomsk (Siberian Physicochemical Institute, Tomsk), Leningrad,
admy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-
tekhnicheskoy institut (Moscow Institute of Chemical Technology), Leningradskiy
tekhnologicheskoy institut im. Lenaveta (Leningrad Technological Institute imeni
Lenaveta), Belorusskoy politekhnicheskoy institut Minsk (Belorussian Polytechnic
Institute, Minsk), Novosibirskiy politekhnicheskoy institut (Novosibirsk
Polytechnic Institute), and Sverdlovskiy politekhnicheskoy institut (Sverdlovsk
Polytechnic Institute). The Conference was sponsored by the Institute of Silicate
Chemistry AS USSR (Acting Director - A.S. Gorbil), the Vsesoyuznoye khimicheskoye
obshchestvo imeni D.I. Mendeleeva (All-Union Chemical Society imeni D.I.
Mendeleeva), and the Gosudarstvennyy ordena Lenina opticheskoy institut imeni
S.I. Vavilova (State Order of Lenin Optical Institute imeni S.I. Vavilov).
The 15 resolutions of the Conference include recommendations to organize a
Center for the purpose of coordinating the research on glass, to publish a new
periodical under the title "Fizika i khimiya stekla" (Physics and Chemistry of
Glasses), and to join the International Union of Pure and Applied Chemistry (IUPAC).
A.A. Lebedev, Academician, Professor, and Chairman of the Organization of Sci-
entists; Ye.A. Poryy-Kozits, Doctor of Physics and Mathematics, Member of the
Organizational Committee; and R.I. Nyul'er, Doctor of Chemical Sciences, Member
of the Organizational Committee. The editorial board thanks O.M. Shalov,
M.V. Vol'kenshteyn, I.I. Dekhtin, D.P. Dobychin, S.K. Durov, V.A. Ioffe, and
B.F. Kolomiys. References accompany individual reports.

Vitreous State (Cont.)	807/5035
Chemical Properties of Glasses	
Dubrovno, S.K. Chemical Properties of Glasses	418
Nikol'skiy, B.P., Ye.A. Maternov, and V.V. Molodtsov. Study of the Inter- action of Electrode Glasses With Solutions by Means of the Inductive Indicator Method	423
Dubrovskiy, V.A., and T.S. Dubrovskiy. On the Composition of the Surface Film of Soda-Alima Silicate Glasses	428
Kokorina, V.F. Effect of Alkali Earth Metal Oxides on the Chemical Stability of Glasses	432
Abramova, A.V. Leaching of Fused Vitreous Materials With Aqueous Acid Solutions and the State of the Oxides in the Structure of Basalt Glass	435
Musilev, L.Ye. Vitrification and Properties of Fused Glasses	437
Card 18/22	

Vitreous State (Cont.)	807/5035
Perbotov, H.A., E.E. Nazov, and V.S. Kozlovskiy. On the Role of Aluminum in Alumino-phosphate Glasses	441
Brekhovskikh, S.M., and V.N. Sazonov. Synthesis and Study of the Properties of Barium Silicate Glasses	444
Discussion	446

SOME VITREOUS SYSTEMS OF A SPECIAL NATURE

Semiconductor Glasses	
Kolomiys, B.T. Semiconductor Glasses	449
Ioffe, V.A., I.V. Petrus, and S.V. Poberovskaya. Electrical Properties of Some Semiconductor Oxide Glasses	454
Kolomiys, B.T., H.A. Goryunova, and V.P. Shilo. Vitreous State in Chalcogenides	456
Kolomiys, B.T. and D.V. Pavlov. Optical Properties of Chalcogenide Glasses	459
Card 19/22	

Vitreous State (Cont.)	807/5035
Kolomiys, B.T., T.N. Mamontova, and T.P. Kazarova. Electrical Properties of Chalcogenide Glasses	463
Vayns, A.A., and Ye.A. Jurnay-Koshits [Doctor of Physics and Mathematics]. X-Ray Diffraction Study of Vitreous Chalcogenides of Arsenic	470
Romanovskiy, V.A., and V.V. Tarasov. Structure and Tendency to Vitrification of Sulfides of Group V Elements in the Periodic System of D.I. Mendeleev	474
Discussion	478

Soda Borosilicate Glasses	
Polyshin, D.P. Control of Porous Glass Structure and Problems of the Soda Borosilicate Glass Structure Connected With It	480
Alimov, V.V. Optical Constants and Density of Soda Borosilicate Glasses	483
Card 20/22	

24,3400

S/081/61/000/019/049/085
B110/B101

AUTHOR: Akimov, V. V.

TITLE: Optical constants and density of sodium boro-silicate glasses

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 309, abstract
19K255 (Sb. "Stekloobrazn. sostoyaniye". M.-L., AN SSSR,
1960, 488-493. Diskus., 522-524)

TEXT: 183 glasses of the $\text{Na}_2\text{O}-\text{B}_2\text{O}_3-\text{SiO}_2$ system having contents (in mole %) of $\text{Na}_2\text{O} = 5 - 40$, $\text{B}_2\text{O}_3 = 0 - 50$, $\text{SiO}_2 = 33 - 85$, were studied as to density, refractive index, mean dispersion, and hardness number. An analysis of the results obtained is given. Sodium boro-silicate glass has a complex composition and is a homogeneous mixture of certain compounds and their dissociation products. An organic interrelation exists between the diagrams of the properties and the equilibrium diagram of this system. [Abstracter's note: Complete translation.] ✓B

Card 1/1

15 2120

25056
S/080/60/033/010/004/029
D216/D306

AUTHOR: Akimov, V.V.

TITLE: Investigation of optical properties of sodium borosilicate glass

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960,
2190 - 2197

TEXT: The object of the author's present work was to investigate 183 different glasses of sodium-borosilicate system containing Na_2O 5-40 mol. %, B_2O_3 0-50 mol. %, and SiO_2 33-85 mol. %. The syn-
thetical compositions of the glass is given in tabulated form. In order to eliminate the error due to loss of volatile, use was made of Lyuberetskiy sand and 3 kinds of glass, heated in a quartz vessel of 50 l. capacity and marked 5-30, 30-30, and 33.3-0, the first number giving the molar composition of sodium oxide, the second of boron anhydride; and the silica content varies. In small quantities, chemically pure soda and boric acid were used. The

X

Card 1/4

Investigation of optical ...

25056
S/080/60/033/010/004/029
D216/D306

heating of glass was done in an electrical furnace at 900-1400°C in a platinum dish (60 cm³ capacity) with stirring. The heating was done for 2-4 hours and for the glass with higher relative proportion of SiO₂ for 5-8 hours. Most of the glass was prepared twice and some 3-5 times, the repeats giving a refractive index to $\pm 2 \cdot 10^{-4}$, mean dispersion $\pm 3 \cdot 10^{-5}$ and density $\pm 5 \cdot 10^{-4}$ which is in the range of the accuracy of measurements. The annealing temperature for 12 glass of ratio $\frac{S}{N} = 4$ [Abstractor's note: Author uses following short denotions: $\frac{Na_2O}{B_2O_3} = \frac{N}{B}$, $\frac{SiO_2}{Na_2O} = \frac{S}{N}$, and $\frac{SiO_2}{B_2O_3} = \frac{S}{B}$] was found by the Twayman method [Abstractor's note: Method not explained]. With an increase of B₂O₃ content this temperature rises reaching a maximum for 15-16 % of B₂O₃ (or $\frac{N}{B} = 1.0-1.1$), then it falls to the initial value at glass 14-30. The glass was subjected

Card 2/4

25056

S/080/60/033/010/004/029

D216/D306

Investigation of optical ...

to fine annealing in a inertion furnace with the rate of fall in temperature of 2.5°C/hr . The glass of system $\text{Na}_2\text{O}-\text{SiO}_2$ adjacent to glass of system $\text{Na}_2\text{O}-\text{B}_2\text{O}_3-\text{SiO}_2$, leached glass and also glass with more than 30-35 % of Na_2O content were found to be hygroscopic. Glass 40-20 dissolved in air. The special experiments on oxidation (at 350°C) of the glass powder, kept in air, showed that the stability of the glass towards moisture increases towards the ratio $\frac{\text{N}}{\text{B}} = 0.8-1.0$ and also with increase of silica content in glass. Chemical analysis of the composition of 33 glass showed the presence of impurities: 0.15 % of Al_2O_3 and traces of As_2O_3 , Fe_2O_3 , CaO , MgO . Compared to synthesis figures, the SiO_2 content is found to be higher by average of 0.8 %, Na_2O lower by 0.35 % and B_2O_3 by 0.45 %. The results of investigation of refractive indices n_D and dispersions $M_p - M_c$ are given in tabulated form. The plotting of

Card 3/4

25056

S/080/60/033/010/004/029

D216/D306

Investigation of optical ...

property curves shows definite peaks and breaks of composition corresponding to ratio $\text{Na}_2\text{O}/\text{B}_2\text{O}_3$ close to one and $\text{SiO}_2/\text{Na}_2\text{O}$ close to two. The breaks corresponding to the transition border of leached glass and probably to the borders of polymorphic transformation of silica. The coincidence of properties with the multiple proportions of components is obviously connected with the existence in sodium borosilicate glass, of definite compounds of SiO_2 , $\text{Na}_2\text{O} \cdot 2\text{SiO}_2$, Na_2O , $\text{B}_2\text{O}_3 \cdot 2\text{SiO}_2$ and others. There are 4 figures, 1 table and 11 references: 4 Soviet-bloc and 7 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: D.J. Gooding and W.E.S. Turner, J. Soc. Glass Techn., 18, 69, 32, 1934; T.H. Wang, and W.E.S. Turner, J. Soc. Glass. Techn., 29, 390, 1945; Ainsworth, J. Soc. Glass Techn., 38, 185, 536, 1954; G.W. Morey, J. Soc. Glass Techn., 35, 167, 270, 1951.

SUBMITTED: June 22, 1959

Card 4/4